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## ABSTRACT

College students employ a number of cognitive strategies to help them cope with stress and anxiety. Some students expect to do well and have done well in the past (optimists), while others have done well in the past but expect to perform poorly on future tasks (defensive-pessimists). Such coping strategies have been presumed to cushion self-esteem from threatening situations. This study questioned the assumption that coping strategies primarily cushion global self-esteem by examining which specific components or facets of self-concept differentiate optimists from defensive-pessimists. The relative strengths of 13 components of self-concept were compared between groups of college students (N=209) living on campus at a northwestern university, utilizing distinct coping strategies. The results indicated that strategies may have differential costs in the form of levels of stress. This study provides a new view of the dynamics and implications of coping styles used in academic situations. Rather than assume that coping styles are cushioning strategies for "self-esteem" per se, it is just as likely that they have more specificity and cushion weak or poorly developed facets of the self. Regarding stress, indeed defensive-pessimists and those without consistent coping strategies showed themselves to be more stressed than optimists. Although non-optimistic strategies may work, they may not be worth the price of long term stress. (Author/ABL)

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## ACADEMIC COPING STYLES, SELF-CONCEPT, AND STRESS

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## **Academic Coping Styles, Self-Concept, and Stress**

### **ABSTRACT**

College students employ a number of cognitive strategies to help them cope with stress and anxiety. Some students expect to do well and have done well in the past (Optimists), while others have done well in the past but expect to perform poorly on future tasks (Defensive-pessimists). Such coping strategies have been presumed to cushion self-esteem from threatening situations. The present study questions the assumption that coping strategies primarily cushion global self-esteem. What specific components or facets of self-concept differentiate Optimists from Defensive-pessimists? The relative strength of 13 components of self-concept are compared between groups of college students utilizing distinct coping strategies. Previous research has indicated students may perform equally well regardless of strategy. The present data indicates that strategies may have differential costs in the form of levels of stress. Patterns of self-concept component strengths, levels of stress, and implications for college counselors are discussed.

## ACADEMIC COPING STYLES, SELF-CONCEPT, AND STRESS

Submitted on October 21, 1991

Thousands of college students descend on their campus at the beginning of each school year. They arrive with a dizzying array of backgrounds, abilities, and expectations. In the college counseling centers psychologists/therapists/counselors prepare to provide assistance to students requesting help with personal, academic, and social problems. What strategies do students bring with them to cope with the demands of college? What personal characteristics do students see as strengths they can draw on to deal with this transition period in their lives? For those of us in the counseling centers, the answers to these questions can provide a useful focus for interventions with students experiencing problems.

A useful way for students to interpret important situations is to view these situations as problems they need to solve (Cantor & Kihlstrom, 1987). Individuals construct or represent these problems in a variety of ways, which is not surprising given the ambiguous complex situations generally encountered (Cantor, 1984; Kihlstrom, 1984). The process of problem solving involves evaluation of the effectiveness of ongoing behavior in reference to specific goals (Norem & Cantor, 1986a).

Universities do have a major focus on student achievement. Students are presented daily with situations from which they can emerge successful and satisfied or unsuccessful and disappointed. Individuals develop a number of self-protective strategies to cope with the stress and anxiety elicited by these situations (Norem & Cantor, 1986b).

Cantor and colleagues at the University of Michigan have provided intriguing findings regarding college students' use of defensive cognitive strategies. One such strategy known as defensive-pessimism refers to the student setting low expectations, despite good past achievement performance, and experiencing feelings of intense anxiety before a task. These students are generally not impaired by this strategy and it seems to be one way of confronting their anxieties and planning for outcomes (Norem & Cantor, 1986a). Interference with students' ability to use what might appear to be a negative strategy actually impairs their task performance (Norem & Cantor, 1986b). Cantor et al. (1987) have delineated the measurement of several achievement related cognitive coping strategies (schematic optimists, schematic pessimists, defensive pessimists, & aschematics) and noted that defensive pessimists have more discrepancy between their perceptions of their actual and ideal selves than do schematic optimists.

Although self-discrepancy measures (e.g. Higgins, Klein, & Strauman, 1985) provide some information regarding

self perception and in particular self concept status, other approaches may be more productive in delineating differences between students using various academic coping strategies. In fact these strategies can be viewed as protective mechanisms actually in the service of maintaining acceptable levels of self-esteem (Norem & Cantor, 1986a).

Much of the early research on self-esteem focussed on global evaluation of self (Rosenberg, 1965; Coopersmith, 1967). The focus of more recent research has been on hierarchical (Shavelson & Marsh, 1986) and multidimensional models of self concept (Marsh, 1986). Marsh and colleagues have developed and validated three age-specific measures of multidimensional self concept (Marsh, Barnes, Cairns, & Tidman, 1984; Marsh & O'Neill, 1984; Psychological Corp., 1990).

Although the hierarchical model proposed by Shavelson (Shavelson, Hubner, & Stanton, 1976), with the most important "general self" at its peak and lesser or subcategories of self lower in the hierarchy, has intuitive appeal there is little empirical support for the hierarchical model of self concept. Marsh (1986) has summarized previous research and provided additional evidence that when students provide ratings of the relative importance of each facet of self concept there is no improvement in the prediction of general self-esteem when compared to unweighted facets. Thus self concept does appear to be multifaceted, and a general/esteem component is

relevant, however that component is no more important than other components indicating that the hierarchical model may have more heuristic value than empirical support at this time.

A self concept measure appropriate for college students should provide for assessing each component of self concept including an independent general/esteem component. The Self Description Questionnaire III (SDQIII; Marsh & O'Neill, 1984; Psychological Corp., 1990) is such an assessment tool which provides an index for 13 facets of self concept (e.g. Physical Ability, Emotional, Verbal, General Self). Such a measure of self concept can provide new insights and useful information regarding which facets of self concept are weaker or stronger for students using different coping strategies such as defensive pessimism. What components of the self might coping strategies be striving to defend or maintain in the college population?

In addition to coping styles and self concept is the issue of how much stress students are experiencing. For those of us in the college counseling centers stress management training for students is much in demand. Although there is a substantial literature with a focus on external stressful life events (e.g. Dohrenwend & Dohrenwend, 1974, 1981), a compelling argument can be made that an individual's interpretation and emotional reaction to events is a more fruitful focus for understanding and

intervention with regard to stress (Lazarus, 1977; Gore, 1981).

In keeping with this cognitive perspective on stress, a global measure of perceived stress would indicate students' current perceptions of their level of stress based on their own idiosyncratic interpretations of events they are experiencing. Cohen, Kamarck, and Mermelstein (1983) developed and validated a short global measure of perceived stress. This measure has been used successfully in monitoring college student stress levels in research on life transitions (Cantor et. al., 1987).

A survey of college students was conducted to address some of the issues raised by the research discussed above. Do students using different cognitive coping strategies experience different levels of perceived stress as they start the school year? What components of the self might these coping strategies be striving to defend or maintain?

#### METHOD

During the third week of Fall semester 209 students completed surveys. All students were living on campus at a university of approximately 9000 students located in the northwestern United States. Males and females responded in similar proportions 47% and 52% respectively.

The survey required 45 minutes to complete and was administered to groups of 20-30 students. The survey



included several instruments not relevant to the present discussion.

The three survey measures relevant to this study are the Self Description Questionnaire III (SDQIII), the optimism/defensive-pessimism screening inventory, and the Perceived Stress Scale (PSS).

The SDQIII (Marsh & O'Neill, 1984) includes scales measuring 13 components of self-concept. Each scale consists of 10-12 items responded to on an 8-point scale from "definitely false" to "definitely true." The scales: Physical Ability, Physical Appearance, Opposite Sex Relations, Same Sex Relations, Relations With Parents, Spiritual Values/Religion, Honesty, Emotional Stability, Verbal, Math, General Academic, Problem Solving, and General Self. Scores across scales can also be summed for a Total Self-Concept score.

The Optimistic Pessimistic Prescreening Questionnaire (OPPQ; Norem & Cantor, 1986a, 1986b) is a single 9-item scale responded to in a likert format from 1-11 ("Not at all true of me" to "Very true of me"). Scoring procedures allow identification of four types of responders: Optimists, Defensive-Pessimists, Pessimists, and Aschematics.

The PSS (Cohen et al., 1983) provides a single index of current level of perceived stress. The PSS consists of 14 items responded to on a 4-point scale from "never" to "very often."

## RESULTS

Analysis focussed on comparisons of scores for each of the four coping-style groups (Optimists, Defensive-Pessimists, Pessimists, and Aschematics). Of particular interest were differences in scores for: level of perceived stress, specific components of self-concept, and satisfaction with school.

A multiple-contrast approach was used with the Tukey procedure applied to control for experiment-wise error and to adjust for unequal cell sizes. All contrasts made use of a .05 significance level, .95 confidence interval, and a critical difference value of 3.881.

Table I summarizes the mean scores for all groups. The last column indicates pairings of groups for which significant differences were found at the .05 level.

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There were no significant differences between groups on four components of self-concept (Spirituality, Physical Appearance, Samesex Relations, and Physical Ability). Interestingly there was also no difference between groups in their general satisfaction with school as indicated by ratings on a 6-point scale for a question about current level of satisfaction with school.

For those areas where there were significant differences between groups, a pattern emerges. Optimists were generally different than other groups, while few other groups were different than each other. On the more global measures, Optimists were less stressed than Defensive-Pessimists and Aschematics (Aschematics are those less likely to stick with any one coping style.) Relative to Defensive-Pessimists and Aschematics, Optimists are more satisfied with their skills at handling stress and more satisfied with life in general.

With regard to components of self-concept, Optimists have a variety of components which are relatively stronger than for other groups. When the scores for all components are summed (Total Self-Concept), Optimists score higher than Defensive-Pessimists and Aschematics. Other self-concept facets endorsed more strongly by Optimists than Defensive-Pessimists and Aschematics include: General Self, Honesty, Verbal Ability, Emotional Stability, and Academic Ability.

Other facets of self-concept also differentiated Optimists from other groups. Optimists are more confident in their Relations With Parents than Defensive-Pessimists and with their Problem Solving Ability than Aschematics. They also score higher on the Math Ability and General Academic components of self-concept than Pessimists.

There was only one significant difference between groups other than the Optimists. The Defensive-Pessimists

were not as confident in the Emotional Stability facet of self-concept as were the Pessimists.

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Table 2 summarizes the mean scores for males across all groups. Between coping style groups, few differences were found when comparing the various self-concept components. Males using the different coping styles also did not differ in their ratings of satisfaction with life in general, satisfaction with school, nor satisfaction with their ability to handle stress.

Where differences did occur between groups, Optimists generally stood out as having stronger specific aspects of self-concept than Aschematics for the Total Self-Concept score, Honesty, Verbal Ability, and Academic Ability. Optimists also received higher Academic Ability scores than Pessimists. Males using an Optimistic coping strategy were also less stressed than those whose coping styles waver (Aschematics). Other differences were noted in that the Defensive Pessimists scored higher on Honesty than

Aschematics and scored higher on Physical Appearance than Pessimists.

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Table 3 summarizes the mean scores for females across all coping style groups. Once again, most differences noted were between the group using an Optimistic strategy and the other groups. Optimists stood out as quite different than both Defensive-Pessimists and Aschematics: Optimists were less stressed, had higher total self-concept scores, felt more emotionally stable, believed more in their academic ability, and were more satisfied with their ability to handle stress.

Optimists also differed from Pessimists on several aspects of self-concept. Optimists scored higher on Total Self-Concept, Honesty, and Academic Ability components of self-concept.

### DISCUSSION

Several studies have begun to document the dynamics and implications of coping styles such as defensive-pessimism. Norem and Cantor (1986a) argue that cognitive coping strategies such as defensive-pessimism are effective cushioning processes against threats to self-esteem. Such strategies can provide a means of coping with anxiety to prevent it from becoming debilitating (Norem & Cantor,

1986b). It has also been found that seemingly negative strategies such as defensive-pessimism can provide motivation, anxiety management, and control for some students, but could possibly have long term detrimental effects if such a strategy contributes to stress (Cantor et al., 1987).

The present study provides a new view of the dynamics and implications of coping styles used in academic situations. Rather than assume that coping styles are cushioning strategies for "self-esteem" per se, it is just as likely they have more specificity and cushion weak or poorly developed facets of the self. Other issues addressed included levels of perceived stress for different coping styles and how satisfied they are with life and school.

Regarding stress, indeed defensive-pessimists and those without consistent coping strategies (aschematics) show themselves to be more stressed than optimists. Although non-optimistic strategies may work, they may not be worth the price of long term stress. The patterns of results were somewhat different for males and females. Female Optimists are more satisfied with their skills for handling stress and are more satisfied with life in general than are defensive pessimists and aschematics. Optimistic coping strategies coincide with less stress and more satisfaction for this sample of female college students. Males however did not show the pattern of group differences in these satisfactions (life, school, stress management). With the exception of

the Optimists feeling less stressed than Aschematics, coping style differences do not reflect differences in satisfaction for this sample of male college students. Although students using non-optimistic strategies may achieve in the short run, the costs of these strategies and alternative strategies are topics which could be presented in counseling center workshops on stress/anxiety management.

What facets of self-concept vary in strength between those using different coping strategies? The answer to this question is both complex and intriguing. Regardless of coping style, students had relatively equally valued self-concept components of spirituality, relations with opposite sex, physical appearance, relations with same sex, and physical ability. This finding provides for the possibility that these are not parts of the self needing a differential coping or cushioning strategy. Males did show one exception to this pattern. Pessimists were more accepting of their physical appearance than defensive-pessimists. Although generally negative, perhaps pessimists are more realistic than defensive-pessimists and this could result in more acceptance of their appearance.

With regard to other facets of self-concept in this sample of college students, Optimists again would seem to have the upperhand. They are more confident in their abilities in numerous areas compared to defensive-pessimists, pessimists, and aschematics. When looking at achievement related components optimists believe more

strongly in their academic ability, problem solving, verbal ability, and mathematics ability than those using other strategies.

Coping styles differentiated more self-concept components for females than for males. For both genders, Optimism generally provided for higher scores for certain areas of self-concept in contrast to aschematics. However, for females there were also noteworthy differences in terms of optimists feelings of more emotional stability, better relations with parents, and better academic ability compared to defensive-pessimists.

This data brings up the possibility that optimists are not in fact engaging in a "coping strategy" at all, rather their approach to situations simply reflects their belief in the strength of situationally relevant self-concept components. In contrast, defensive pessimists and aschematics have relatively weaker achievement related components of self to foster a genuine optimistic outlook.

The benefits of an optimistic coping strategy in college include less stress and more satisfaction with life. However, the present data indicates that it may not be directly beneficial for college counselors/psychologists to target coping style changes in students with styles such as defensive pessimism. Self-concept would seem to be a better target for change which may then provide the self-situation relevant strength to promote an optimistic outlook on achievement.



In particular, specific areas of self-concept can be identified which are protected by coping strategies (as were identified in this study). These self-concept components can then provide starting points from which counselors can explore the personal and/or academic issues concerning the student at the present time. Specific positive belief systems regarding specific components could be elicited and attempts made to develop similar beliefs regarding self-concept components which particularly distress the student. Other applications and implications of coping styles, multidimensional self-concept, and stress will be forthcoming as more of the needed research is conducted in this area.

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Table 1

Mean Scores By Coping Style

Group #	1 Optimists (n=86)	2 Def. Pessimists (n=57)	3 Pessimists (n=22)	4 Aschematics (n=44)	Signif. Gp. Dif. p<.05
Total Stress	20.41	24.55	22.48	24.86	1-2, 1-4
Total Self-Concept	756.73	711.22	723.31	701.77	1-2, 1-4
Mathematics	46.15	45.08	37.36	41.72	1-3
Spirituality	61.33	57.45	56.63	56.29	
General Self	74.82	69.45	71.54	69.04	1-2, 1-4
Honesty	76.56	74.85	71.95	69.63	1-2, 1-4
Relat. Opp. Sex	52.19	49.61	54.90	50.18	
Verbal	60.77	56.40	55.77	53.90	1-2, 1-4
Emotional	53.16	45.96	52.04	47.04	1-2, 1-4, 1-3
Relat. Parents	57.12	51.45	55.00	53.81	1-2
Academic	57.82	52.17	48.22	49.38	1-2, 1-3, 1-4
Problem Solving	55.09	53.80	55.13	50.13	1-4
Phys. Appearance	48.52	46.54	51.13	47.27	
Relat. Same Sex	55.31	52.28	54.40	52.75	
Physical Ability	57.82	58.12	59.18	60.38	
Satis. Life General	5.15	4.63	4.86	4.58	1-2, 1-4
Satis. School	4.73	4.55	4.57	4.32	
Satis. Skill Stress	4.60	3.77	4.27	3.90	1-2, 1-4

Table 2

Males: Mean Scores By Coping Style

Group #	1 Optimist (n=34)	2 Def.-Pess (n=28)	3 Pessimist (n=12)	4 Aschematic (n=24)	Signif Gp. Dif p<.05
Total Stress	18.38	22.26	21.27	23.79	1-4
Total Self-Con.	748.02	715.32	752.08	697.08	1-4
Mathematics	45.91	47.11	40.50	45.54	
Spirituality	55.62	52.32	56.50	51.25	
General Self	74.82	69.39	75.50	69.04	
Honesty	75.21	74.75	73.75	67.08	1-4, 2-4
Relat. Opp. Sex	51.44	48.11	57.67	49.25	
Verbal	60.15	55.64	55.58	51.46	1-4
Emotional	52.38	47.68	52.42	48.08	
Relat. Parents	55.56	51.68	55.67	51.83	
Academic	57.00	51.43	48.58	48.83	1-4, 1-3
Problem Solving	57.44	54.93	59.17	52.21	
Phys. Appearance	48.44	47.21	55.50	47.75	2-3
Relat. Same Sex	54.50	52.11	57.08	52.50	
Physical Ability	59.56	62.96	64.17	62.25	
Satis. Life Gen.	5.09	4.68	5.08	4.88	
Satis. School	4.59	4.75	4.58	4.54	
Satis. Skill Stress	4.59	4.29	4.58	4.38	

Table 3

## Females: Mean Scores By Coping Style

Group #	1 Optimist (n=52)	2 Def.-Pess (n=29)	3 Pessimist (n=10)	4 Aschematic (n=20)	Signif. Gp.<Dif. p .05
Total Stress	21.73	26.69	23.80	26.15	1-2,1-4
Total Self-Con.	762.42	707.28	688.80	707.40	1-2,1-3,1-4
Mathematics	46.31	43.18	33.60	37.15	1-3
Spirituality	65.08	62.41	56.80	62.35	
General Self	74.83	69.52	66.80	69.05	
Honesty	77.46	74.97	69.80	72.70	1-3
Relat. Opp. Sex	52.69	51.07	51.60	51.30	
Verbal	61.19	57.14	56.00	56.85	
Emotional	53.67	44.31	51.60	45.80	1-2,1-4
Relat. Parents	58.15	51.24	54.20	56.20	1-2
Academic	58.37	52.90	47.80	50.05	1-2,1-3,1-4
Problem Solving	53.56	48.79	50.30	48.05	
Phys. Appearance	48.58	45.90	45.90	46.70	
Relat. Same Sex	55.85	52.45	51.20	53.05	
Physical Ability	56.69	53.45	53.20	58.15	
Satis. Life Gen.	5.20	4.59	4.60	4.21	1-4
Satis. School	4.83	4.36	4.56	4.05	1-4
Satis. Skill Stress	4.63	3.28	3.90	3.32	1-2,1-4